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10/682,270	10/09/2003	Dean R. Throndsen	RELAPR-2	827

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LATHROP & CLARK LLP
740 REGENT STREET SUITE 400
P.O. BOX 1507
MADISON, WI 537011507

EXAMINER	
VALENTI, ANDREA M	
ART UNIT	**PAPER NUMBER**
3643	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

Office Action Summary	**Application No.** 10/682,270	**Applicant(s)** THRONDSEN ET AL.	
	Examiner Andrea M. Valenti	**Art Unit** 3643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 July 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-40* is/are pending in the application.

4a) Of the above claim(s) *33* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11, 13-32, and 34-40* is/are rejected.

7)☒ Claim(s) *12* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 October 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Group I claims 1-32 and 34-36 in the reply filed on 7 July 2004 is acknowledged. Examiner maintains the restriction requirement since Group II claim 33 is related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention Group II has separate utility such as a seat cushion, raft, or packaging material and does not relate back in a positive limitation to an animal nor to the orifice dividing the two fluid chambers. See MPEP § 806.05(d).

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the second and third ply layers of the lamination and the fluid passage clamp must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: element #51.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-4 and 19-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,152,077 to Bristow in view of U.S. Patent No. 3,503,084 to Meinwieser.

Regarding Claims 1, 34, and 36, Bristow teaches a bed strip for livestock (Bristow #20) comprising: a top belt (Bristow Fig. 4 #12); a bottom belt, said belts having a front end, a rear end, a right end and a left end, wherein said bottom belt is bonded by a fluid tight seal to said top belt along the margins of said belts (Bristow Col. 2 line 50) at least one longitudinally spaced stripe extending from said front end margin to said rear end margin, wherein said at least one stripe divides said bed strip into at least one fluid tight bed; said at least one bed having a left side and a right side creating a convex pillow shape (Bristow Fig. 6).

Bristow is silent on at least one bed having a band extending from said left side to said right side of said at least one bed, wherein said band is defined by a discontinuous fluid tight bond between said bottom belt and said top belt such that said band divides said at least one bed into an expandable front fluid chamber and an expandable rear fluid chamber, said rear fluid chamber being interconnected to said front fluid chamber through at least one orifice defined by a discontinuity in said band; and said fluid chambers being adapted to contain a working volume of fluid such that the portions of said top belt that are not bonded to said bottom belt forming said front and rear fluid chambers will elastically assume convex pillow-like shapes such that the point loading of a standing animal's foot on said rear fluid chamber will press said top belt into stable supporting contact with said bottom belt, whereas, when the animal drops to its knees on the front fluid chamber, the animal's knees will be cushioned and separated from said bottom belt by fluid between said belts.

However, Meinwieser teaches at least one bed having a band extending from said left side to said right side of said at least one bed, wherein said band is defined by a discontinuous fluid tight bond between said bottom belt and said top belt such that said band divides said at least one bed into an expandable front fluid chamber and an expandable rear fluid chamber (Meinwieser Fig. 1 #26), said rear fluid chamber being interconnected to said front fluid chamber through at least one orifice (Meinwieser #27) defined by a discontinuity in said band; and said fluid chambers being adapted to contain a working volume of fluid such that the portions of said top belt that are not bonded to said bottom belt forming said front and rear fluid chambers will elastically assume convex pillow-like shapes such that the point loading of a standing animal's foot on said rear fluid chamber will press said top belt into stable supporting contact with said bottom belt, whereas, when the animal drops to its knees on the front fluid chamber, the animal's knees will be cushioned and separated from said bottom belt by fluid between said belts. It would have been obvious to one of ordinary skill in the art to modify the teachings of Bristow with the teachings of Meinwieser to better accommodate the anatomical features and weight of the particular user as taught by Meinwieser (Meinwieser Col. Lines 37-71 and Col. 2 line 1-35). That it is old and well-known in the art that providing communicating compartments facilitates a desirable fluid distribution and provides more comfort to the user.

Regarding Claim 2, Bristow as modified teaches the animal lies down on said at least one bed, the knees and hocks of the animal lying on said fluid chambers will be supported above said bottom belt by fluid between said top and bottom belts (Bristow Fig. 6 and claim 1).

Regarding Claims 3 and 35, Bristow as modified teaches the animal lies down on said at least one bed, substantial portions of the animal's body trunk will press portions of said top belt into stable contact with said bottom belt to thereby displace fluid from beneath the top belt portion under the animal's body trunk into portions of the fluid chambers supporting the udder, knees and hocks of the animal (Meinwieser Fig. 1 #26 and 27).

Regarding Claim 4, Bristow as modified teaches the top and bottom belts are comprised of an elastomeric material (Bristow Col. 2 line 40-41).

Regarding Claim 19, Bristow as modified teaches the band has a dimension, in the direction parallel to said left and right sides of said at least one bed, such that a standing animal may place its front hooves on said band in stable supported relation (Bristow Fig. 5 and 6 and Meinwieser Fig.1 #26).

Regarding Claim 20, Bristow as modified teaches the band is positioned such that said front fluid chamber has a smaller surface area than said rear fluid chamber (Meinwieser Fig. 1 front #31 and 32 and rear #14 and 15).

Regarding Claim 21, Bristow as modified teaches the least one bed contains fluid (Bristow Col. 2 line 15).

Regarding Claim 22-24, Bristow as modified fluid is comprised of a liquid/water (Col. 2 line 50).

Regarding Claim 25, Bristow as modified teaches the fluid passage for accessing at least one fluid chamber of at least one said bed to allow the fluid chamber of at least said one bed to be filled with fluid (Bristow #15).

Regarding Claims 26 and 27, Bristow as modified teaches the fluid passage comprises a tube extending between said top and bottom belts from a margin of said bed strip into at least one interconnected fluid chamber of said at least one fluid tight bed (Bristow #15).

Regarding Claim 28, Bristow as modified teaches a closure means for retaining the fluid in said fluid chambers (Bristow Col. 2 line 46).

Regarding Claim 29-31, Bristow as modified teaches a means for securing said bed strip to a supporting structure (Bristow #16 and 18).

Regarding Claim 32, Bristow as modified teaches the upper surface of the top belt is embossed with interstices to provide a low coefficient of fiction against an animal's skin, while maintaining a surface on which the animal may walk when the surface is wet without substantial foot slippage (Bristow Col. 4 line 10), but is silent on the interstices between about 0.0010 inches and 0.0030 inches. However, it would have been obvious to one of ordinary skill in the art to modify the teachings through routine test and experimentation to derive at the optimum surface traction since the modification is merely identifying a dimension (i.e. size change) for optimal conditions.

Claims 5-11 and 13-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,152,077 to Bristow in view of U.S. Patent No. 3,503,084 to Meinwieser as applied to claim1 above, and further in view of U.S. Patent No. 3,426,891 to Marks.

Regarding Claims 5-10, Bristow as modified teaches the top belt has a first ply of elastomeric material (Bristow rubber Col. 2 line 40-41), but is silent on the top belt is comprised of a laminate having at least one first ply comprised of an elastomeric material and at least one second ply comprised of a material inherently having a modulus of elasticity greater than the modulus of elasticity of said elastomeric material. However, laminating different layers is an old and well-known procedure in geotextile manufacturing for the advantage provided by the different properties of each layer to enhance durability, flexibility, etc. In this instance, Marks teaches a cushion with dual layers and one layer having a greater modulus of elasticity then the other and least one second ply is comprised of a loom woven fabric of synthetic filament fibers having polyester warp fibers extending in a direction generally parallel to said front and rear ends of said belts and nylon weft fibers extending in a direction generally parallel to said right and left ends of said belts (Marks Col. 4 line 26 and 30-50). It would have been obvious to one of ordinary skill in the art to modify the teachings at the time of the invention for the expandable properties of the second layer as taught by Marks.

Regarding Claim 11, Bristow as modified teaches the first layer is a natural rubber (Bristow Col, 2 line 40) and at least one second ply comprised of a material having a modulus of elasticity greater than the modulus of elasticity of said first ply (Marks Col. 4 line 26 and 30-50), said material having a greater modulus of elasticity in a direction generally parallel to said front and rear ends of said belts, than in a direction generally parallel to said right and left ends of said belts, said at least one second ply being bonded on top of said first bottom ply, but is silent on a third ply comprised of natural rubber formulated to resist chemicals and fluids normally found in an animal enclosure, said third ply being bonded on top of said at least one second ply. However, it would have been obvious to one of ordinary skill in the art to modify the teachings at the time of the invention since the modification is merely the duplication of a known layer for a multiple effect to provide a more durable structure that is notoriously well-known in the art of lamination.

Regarding Claim 13, Bristow as modified is silent on the bottom belt is comprised of a material having a modulus of elasticity greater than the modulus of elasticity of the material comprising said top belt. However, it would have been obvious to one of ordinary skill in the art through routine tests and experimentation to select the desirable physical properties (i.e. modulus of elasticity) of known materials for intended use to optimize the ergonomic comfort and durable expansion of the device.

Regarding Claim 14, Bristow as modified teaches the bottom belt is comprised of a laminate having at least one first ply comprised of an elastomeric material and at least one second ply comprised of a material having a modulus of elasticity greater than the modulus of elasticity of said elastomeric material (Marks Fig. 3).

Regarding Claims 15 and 16, Birstow as modified teaches the at least one second ply is comprised of a loom woven fabric of synthetic filament fibers (Marks Col. 4 line 26 and 30-50).

Regarding Claims 17 and 18, Bristow as modified teaches the bottom layer is a natural rubber (Bristow Col, 2 line 40) and at least one second ply comprised of a material having a modulus of elasticity greater than the modulus of elasticity of said first ply (Marks Col. 4 line 26 and 30-50), said material having a greater modulus of elasticity in a direction generally parallel to said front and rear ends of said belts, than in a direction generally parallel to said right and left ends of said belts, said at least one second ply being bonded on top of said first bottom ply, but is silent on a third ply comprised of natural rubber formulated to resist chemicals and fluids normally found in an animal enclosure, said third ply being bonded on top of said at least one second ply. However, it would have been obvious to one of ordinary skill in the art to modify the teachings at the time of the invention since the modification is merely the duplication of a known layer for a multiple effect to provide a more durable structure that is notoriously well-known in the art of lamination.

Claims 37-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,152,077 to Bristow in view of U.S. Patent No. 3,503,084 to Meinwieser as applied to claim1 above, and further in view of U.S. Patent No. 4,076,872 to Lewicki.

Regarding Claims 37 and 39, Bristow as modified is silent on a separation foil. However, Lewicki teaches a separation foil (Lewicki Fig. 6 #2). It would have been obvious to one of ordinary skill in the art to modify the teachings at the time of the invention to provide added support structure to promote longevity and durability.

Regarding Claim 38 and 40, Bristow as modified teaches a plurality of separation foils (Lewicki Fig. 6 #2) interposed between said top and bottom belts, said separation foils having a surface area smaller than the surface area of said top and bottom belts such that said separation foils prevent said top belt from bonding to said bottom belt within areas wherein said separation foils are interposed, said separation foils being positioned between said top and bottom belts such that the margins of said top and bottom belts may be bonded together in fluid tight relation by heat and pressure, and separation foils being longitudinally spaced such that said top and bottom belts bond in the stripes between said separation foils to thereby form a plurality of beds, each such bed consisting of areas in which said top and bottom belts are not bonded surrounded by a continuous area of fluid tight bond (Bristow Fig. 3), thereby forming a plurality of expandable fluid chambers that may be filled with fluid, said separation foils having a generally rectangular shape and having such portions removed therefrom to allow a discontinuous band of bonded material extending generally parallel to said front and rear ends of said belts and extending the width of said beds to thereby divide said fluid chambers into a plurality of restrictively connected front fluid chambers and rear fluid chambers, a fluid passage (Bristow #15) for accessing at least one of said front and rear fluid chambers to thereby fill both of said fluid chambers with fluid; and a closure for said fluid passage to selectively permit and prevent fluid flow to and from said fluid chambers (Bristow Col. 2 line 46).

Allowable Subject Matter

Claim 12 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5,642,544; U.S. Patent No. 4,405,129; U.S. Patent No. 6,131,219; U.S. Patent No. 4,389,742; U.S. Patent No. 5,604,945; U.S. Patent No. 3,583,008; U.S. Patent No. 2,465,268; U.S. Patent No. 3,983,587; U.S. Patent Pub. No. US 2004/0010853; PCT WO 94/15452.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrea M. Valenti whose telephone number is 703-305-3010. The examiner can normally be reached on 7:30am-5pm M-F; Alternating Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter M. Poon can be reached on 703-308-2574. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Andrea M. Valenti

Andrea M. Valenti
Patent Examiner
Art Unit 3643

25 August 2004

Peter M. Poon
Supervisory Patent Examiner
Technology Center 3600